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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,193	12/06/2000	Sadao Nakamura	9281-3858	8730
757	7590	06/30/2004	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,193

Applicant(s)

NAKAMURA ET AL.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicants' amendment dated 03/29/2004 has been received and entered.

By the amendment, claims 1-19 are pending in the application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 and newly added claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (APA), figure 7, in view of Miyazaki et al., US Patent No. 5,978,061.

Regarding claims 1-10, APA disclose a liquid crystal display (LCD) device (figure 7), in which:

a color filter substrate (lower substrate) comprising:

a substrate (201);

a reflective layer (205);

a color filter layer (206).

an opposed substrate (upper substrate);

a liquid crystal layer (203);

a sealing material (204).

Regarding claims 11-13, APA does disclose a second substrate (202) having layers (209, 211) that are electrically isolated from layers of the color filter substrate

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(201), spherical spacers (212), the color filter (206) formed directly on the reflective layer (205)(see figure 7).

However, APA does not disclose the color filter forming outside the effective display area and at least two or three different color layers which constitute the outside of display area color filter layer being vertically aligned. Miyazaki et al. disclose in a portion of the color filter layer outside the effective display area, two or three different color layers stacked on each other (32R, 33G, 33B). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the APA's device having a columnar color filter outside a display area as shown by Miyazaki et al. in order to enhance the display quality as well as to decrease the number of forming steps (see paragraph bridging columns 11 and 12).

Response to Arguments

3. Applicant's arguments filed 05/29/2004 have been fully considered but they are not persuasive.

Applicants' arguments are as follow:

1. Regarding claims 1, 12 and 18-19, Miyazaki particularly teaches away from the arrangements of AAPA and the pending claims as the stack of the color filter (vertically aligned color filter) maintains distance between the upper and lower substrate. In addition, there is no suggestion or motivation exists to combine the references since Miyazaki is directed towards transmissive LCD. Furthermore, it is improper to merely pick and choose various individual elements in different references and combine without motivation.

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2. Regarding claim 13, Miyazaki expressly teaches away from using spherical spacers.
3. Regarding claims 15-16, Miyazaki teaches the use of a light shielding layer in every embodiment.

The Examiner's responses are as follow:

1. The combination of the APA prior art and Miyazaki et al. would take an advantage of the stack of the color filter (i.e., vertically aligned color filter) arranged only outside the effective display area (see figure 9) to improve the display in an LCD device as stated above. Therefore, Miyazaki et al. do not teach away from the arrangements of AAPA. It should also be noted that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In addition, the structure of the stacked color filter outside the effective display area does not affect to reflective type LCD and/or a transmissive type LCD.
2. The combination of the APA prior art and Miyazaki et al. would not take away the use of spherical spacers in the APA prior art. Such combination is just employed the addition using of the columnar spacers as a spacer in the LCD device.

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3. As stated in part one (1), Miyazaki et al. do not teach away from APA prior art and the improvement is not about the light shielding. In other words, the structure of the modification to APA prior art would have the stacked color filter and neither color filter substrate nor the second substrate contains the light shielding layer as claimed invention.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
06/25/2004



Dung Nguyen
Primary Examiner
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